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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,915	02/05/2001	Robert R. Andrews	08261-017001	6193
26161	7590	12/05/2003	EXAMINER	
FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			TRAN, BINH Q	
			ART UNIT	PAPER NUMBER

3748

DATE MAILED: 12/05/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/777,915

Applicant(s)

ANDREWS ET AL.

Examiner

BINH Q. TRAN

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: .

DETAILED ACTION

This office action is in response to the amendment filed September 15, 2003.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brauer (Patent Number 5,951,543) in view of Eisel et al. (Eisel) (Patent Number 5,412,681).

Regarding claims 1 and 6, Brauer discloses a cardiac laser surgery apparatus and method comprising: a CO₂ slab laser (e.g. 620), and a laser delivery system (e.g. See Figs. 5-6) for delivering laser pulses from said laser to a patient's heart (e.g. See Figs. 5-6; col. 8, lines 65-67; cols. 9-10, lines 1-67). However he fails to disclose that the slab laser including two narrowly spaced electrodes having opposed planar surfaces and a rectangular discharge region defined between the opposed planar surfaces of the two narrowly spaced electrodes.

Eisel teaches that it is conventional in the art, to use a slab laser including two narrowly spaced electrodes having opposed planar surfaces and a rectangular discharge region defined between the opposed planar surfaces of the two narrowly spaced electrodes (e.g. See Abstract; Figs. 2-13; col. 5, lines 51-67; col. 6, lines 1-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to use a slab laser including two narrowly spaced electrodes having opposed planar surfaces and a rectangular discharge region defined between the opposed planar surfaces of the two narrowly spaced electrodes of Brauer, as taught by Eisel for the purpose of delivering laser pulses to the CO2 slab laser device; so as to increase the power and efficiency of the laser slab device during laser surgery of the patient's heart.

Regarding claims 2 and 7, Brauer further discloses that the laser delivery system includes a hand piece for delivering pulses to the outside of a patient's heart to provide openings in the patient's heart for myocardial revascularization (e.g. See Figs. 5-6; col. 8, lines 65-67; cols. 9-10, lines 1-67).

Regarding claims 3 and 8, Brauer further discloses that the pulses are shorter than 100 ms and provide energy of between 8 and 80 Joules per pulse (e.g. See Figs. 5-6; col. 10, lines 15-67; col. 11, lines 34-63).

Regarding claims 4 and 9, Brauer further discloses that the laser delivery system is synchronized to the heart beat to fire when the heart is electrically insensitive to reduce the chance of arrhythmia (e.g. See Figs. 5-6; col. 10, lines 15-67; col. 11, lines 34-63).

Regarding claims 5 and 10, Brauer further discloses that the laser starts firing on the R wave and stops before the T wave (e.g. See Figs. 5-6; col. 10, lines 15-67; col. 11, lines 1-63).

Claims 16 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy-Chutorian et al. (Murphy) (Patent Number 5,951,543) in view of Eisel et al. (Eisel) (Patent Number 5,412,681).

Regarding claims 1 and 6, Murphy discloses a cardiac laser surgery apparatus and method comprising: a CO₂ slab laser, and a laser delivery system (See col. 7, lines 45-67; col. 8, lines 1-20) for delivering laser pulses from said laser to a patient's heart (See col. 8, lines 21-67; col. 9, lines 1-67; col. 11, lines 1-14). However he fails to disclose that the slab laser including two narrowly spaced electrodes having opposed planar surfaces and a rectangular discharge region defined between the opposed planar surfaces of the two narrowly spaced electrodes.

Eisel teaches that it is conventional in the art, to use a slab laser including two narrowly spaced electrodes having opposed planar surfaces and a rectangular discharge region defined between the opposed planar surfaces of the two narrowly spaced electrodes (e.g. See Abstract; Figs. 2-13; col. 5, lines 51-67; col. 6, lines 1-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to use a slab laser including two narrowly spaced electrodes having opposed planar surfaces and a rectangular discharge region defined between the opposed planar surfaces of the two narrowly spaced electrodes of Murphy, as taught by Eisel for the purpose of delivering laser pulses to the CO₂ slab laser device; so as to increase the power and efficiency of the laser slab device during laser surgery of the patient's heart.

Regarding claims 2 and 7, Murphy further discloses that the laser delivery system includes a hand piece for delivering pulses to the outside of a patient's heart to provide openings in the patient's heart for myocardial revascularization (See col. 8, lines 21-67; col. 9, lines 1-67; col. 11, lines 1-14).

Regarding claims 3 and 8, Murphy further discloses that the pulses are shorter than 100 ms and provide energy of between 8 and 80 Joules per pulse (e.g. See col. 17, lines 15-67).

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Regarding claims 4 and 9, Murphy further discloses that the laser delivery system is synchronized to the heart beat to fire when the heart is electrically insensitive to reduce the chance of arrhythmia (See col. 8, lines 21-67; col. 9, lines 1-67; col. 11, lines 1-14).

Regarding claims 5 and 10, Murphy further discloses that the laser starts firing on the R wave and stops before the T wave (See Figs. 2; col. 11, lines 11-67; col. 12, lines 1-14).

Response to Arguments

Applicant's arguments filed September 15, 2000 have been fully considered but they are not completely persuasive. ***Claims 1-10 are pending.***

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection as discussed above.

Applicant's amendment (Claims 1-10) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL See MPEP, 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of one patents:

Weinstein et al. (Patent Number 6595990) all discloses system and method for surgical laser of the patient's heart.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (703) 305-0245. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (703) 308-2623. The fax phone number for this group is (703) 746-4561.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

BT
November 28, 2003



Binh Tran
Patent Examiner
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